

## LOWER BACK EXERCISES

Push-ups and crunches can be performed with less risk of injury to the lower back if you have strong abs and lower back muscles.

### **Back extension machine**

Sit on the machine with your legs bent at a 90° angle. Lean back until you reach a slightly hyperextended position. Be sure to control the movement slowly all the way through the range of motion; avoid rapid, jerky movements.



~Using a watch or clock second-hand, count the number of beats that occur in 10 seconds. Multiply this number by 6 to get your heart rate in beats per minute.

~Choose your target heart rate zone based on your fitness goals (60-75% of your HR max for beginners and/or low-intensity workouts; 75-85% for more advanced exercisers and/or high-intensity workouts). For safety reasons, you should avoid working out over 85% of MHR for prolonged periods of time.

~If you are below your training zone, push a little harder. If you are above, slow down and take it easy.

**Time:** 40 or more minutes in your training zone. Higher intensity exercise doesn't require as much time (40 min or more), and lower intensity should be continued for longer periods (45-60 min).

**Type:** Aerobic exercise that uses large muscle groups and is rhythmic & continuous in nature. EX: cycling, walking, jogging, swimming, roller-blading. Activities like basketball, racquetball, or golf will not be helpful for increasing aerobic fitness but can help maintain it.

**Enjoyment:** Choose an activity that you will stay with for a long time. . . one you *want* to do, not *have* to do!

**Rate of progression:** Start slowly, at a frequency, time, & intensity that is comfortable but requires some physical exertion. Gradually increase frequency, time **OR** intensity, but not two or more at the same time! Doing too much too soon leads to injury and burnout. Alternate workouts between high- and low-intensity days.

### ***What can i do for muscular fitness?***

Training for the muscular fitness tests can be accomplished in a number of ways.

One method would be simply to practice push-ups and crunches (specificity training). Do this every other day until you can increase the total number of repetitions you can do in 2 minutes. Work to muscular exhaustion, which is a maximal effort.

You can also train sub-maximally by doing 3 sets of any number of reps that brings you to muscular fatigue, but not complete exhaustion. Rest for 1-2 minutes in between sets.

Another training method for push-ups is “negative resistance.” Instead of doing a push-up, start in the “up” position and slowly lower yourself down in a count of 5. Relax and drop your body to the floor, get onto all fours and resume the “up” position and repeat. Do 3 sets of 8-10 reps.

A third method is to use weight training to develop the upper body muscles involved in the push-up, which are the **TRICEP, CHEST, and SHOULDER.**

The following guide shows you a sampling of recommended exercises for these individual muscle groups. There are many variations on these exercises involving machines or free weights. For a more extensive list, contact your base fitness center or HAWC.

***How often?*** The key to effective weight training is allowing rest days. Muscle groups should not be worked on consecutive days, allowing 24-48 hours of rest between workouts. If you split your routine, you can lift every day, but if you are doing a whole-body workout in one day, then have at least a day in between.

### ***Oblique crunches***

Keep one leg bent at a 90° angle as you bring the other leg in toward you. Curl your opposite shoulder up and keep your elbow back. Imagine touching your shoulder (not your elbow) to your knee so that you get a greater ab contraction. Keep your chin up, not resting on your chest, so you can breathe easier and avoid neck strain. Cup your fingers behind your ear; don't pull on your head. Exhale as you come up and inhale as you go down. Slower, controlled movements will be more effective than rapid, ballistic movements.

